What is ~~claimed~~ Claimed is:

~~CLAIMS~~

1/ Monoclonal antibodies or their fragments, more particularly their Fv, Fab, and F(ab')2 fragments, characterized in that they recognize an epitope of a bacterium of the species *T. equigenitalis*.

2/ Monoclonal antibodies or their fragments, more particularly their Fv, Fab, and F(ab')2 fragments, according to claim 1, characterized in that they do not exhibit a crossed reaction with the epitope or epitopes of a bacterium of a different *Taylorella* species or of a bacterium of a different genus.

3/ Monoclonal antibodies or their fragments, according to claim 1 or 2, characterized in that they are capable of recognizing proteins of *T. equigenitalis* of the group comprising proteins such as proteins of 150 kDa, 120 kDa, 52.7 kDa or 22 (LPS) kDa.

4/ Monoclonal antibodies, characterized in that they can be obtained from hybrids

- by fusion of non-secreting murine myeloma cells with spleen cells from mice immunized using an inactivated strain of the species *T. equigenitalis* or extract(s) from such a strain, and

- cloning and selection according to the capacity of their culture supernatant to recognize an epitope or epitopes of a bacterium of the species *T. equigenitalis*,

- recovery of the required monoclonal antibodies, followed by purification if necessary.

5/ Immunogenic proteins, characterized in that they are capable of interacting with monoclonal antibodies or their fragments according to any one of claims 1 to 4.

6/ Monoclonal antibodies, and their fragments, in particular their Fv, Fab, F(ab')2 fragments, characterized in that they are anti-antibodies, i.e. antibodies capable of interacting with the monoclonal antibodies or their fragments according to any one of claims 1 to 4.

7/ A method of obtaining monoclonal antibodies according to any one of claims 1 to 4, characterized in that it

comprises:

- fusion of non-secreting murine myeloma cells with spleen cells from mice immunized by means of a strain of the species *T. equigenitalis* or extract(s) from such a strain,
- screening by means of a detection technique, such as in particular indirect immunofluorescence, of hybridomas whose culture supernatants exhibit a positive reaction with a bacterium of the species *T. equigenitalis* or a fragment of the latter,
- selection by cloning of these hybridomas with respect to their reactivity, in relation to *T. equigenitalis*, and
- recovery of the monoclonal antibodies, followed if necessary by their purification.

8/ A method of obtaining monoclonal antibodies according to claim 6, characterized in that it comprises:

- fusion of non-secreting murine myeloma cells with spleen cells from mice immunized using monoclonal antibodies or their fragments as defined in one of claims 1 to 4,
- screening by means of a detection technique, such as in particular indirect immunofluorescence, of hybridomas whose culture supernatants exhibit a positive reaction with one of the said monoclonal antibodies or their fragments,
- selection by cloning of these hybridomas, and
- recovery of the required anti-antibodies.

9/ Strains of hybridomas, characterized in that they are capable of secreting monoclonal antibodies according to any one of claims 1 to 4.

10/ Strains of hybridomas, characterized in that they are capable of secreting monoclonal antibodies according to claim 6.

11/ Method of identification of a bacterium of the species *T. equigenitalis* in a sample or in a culture, comprising:

- bringing the sample or the culture to be analysed, which may contain *T. equigenitalis*, into contact with

i. an effective quantity of at least one monoclonal antibody or a fragment of such an antibody according to any one of claims 1 to 4 and, optionally, blocking the non

antigen-antibody reactions,

ii. or, as a variant, to detect the presence of antibodies directed against *T. equigenitalis* with an immunogenic protein according to claim 5 or an antibody according to claim 6,

in conditions permitting a reaction of the antigen-antibody type and

- detection of any product formed in a reaction of the antigen-antibody type.

12/ Method of diagnosis of an infection by *T. equigenitalis*, more particularly contagious equine metritis in a sample or a culture, comprising:

- bringing one or more monoclonal antibodies according to any one of claims 1 to 4 or their fragments, into contact with a biological sample, and

- detection of the reaction of the antigen-antibody type produced in the case when *T. equigenitalis* is present in the sample,

- and, optionally, blocking of the non antigen-antibody reactions, for example, by saturation of the specimen obtained by means of a serum from which anti-*T. equigenitalis* antibodies have been removed.

13/ Kits for the application of a method according to one of claims 11 or 12, characterized in that they include

- one or more monoclonal antibodies, or their fragments, according to any one of claims 1 to 4, or at least one immunogenic protein according to claim 5, or one or more monoclonal antibodies, or their fragments, according to claim 6,

- reagents, in particular markers or buffers, for carrying out the intended immunogenic reaction, and, optionally, reagents for blocking non antigen-antibody reactions such as mouse serum,

- as well as instructions for use.

14/ Pharmaceutical compositions, characterized in that they contain one or more monoclonal antibodies, or their fragments, according to any one of claims 1 to 4, as vectors of medicaments or as agents for passive immunotherapy, alone

or in combination with pharmaceutically inert vehicles.

15/ Vaccinal compositions, characterized in that they contain, in combination with physiologically acceptable excipients, at least one immunogenic protein as defined according to claim 5, or one antibody according to claim 6, or one fragment of one such antibody, in sufficient quantity to evoke an immune response.

16/ Use of the monoclonal antibodies according to one of claims 1 to 4 for the elaboration of biosensors.